Journal of Business and Economics, ISSN 2155-7950, USA
March 2013, Volume 4, No. 3, pp. 242-247

http://www.academicstar.us

The Importance of Strategic Asset Allocation

Lujer Santacruz
(School of Accounting, Economics and Finance, Faculty of Business and Law,
University of Southern Queensland, Toowoomba QLD 4350, Australia)

Abstract: This paper examines the impact of strategic asset allocation on total returns of investment portfolios. It aims to confirm the results of previous studies using US investment data that found strategic asset allocation dominating the other investment decisions namely market timing and security selection. Using data from Australian managed funds, strategic asset allocation is found to account for most of the total returns in terms of magnitude and around 88% of the variability in total portfolio returns. Suggestions are made to expand the scope of the study to be able to generate more conclusive results.

Key words: asset allocation; performance attribution; financial planning
JEL codes: D14; D81; G11

1. Introduction

One of the key concepts in Personal Financial Planning is the importance of strategic asset allocation (i.e., making a long-term decision now on how to allocate investments among the different asset classes such as cash, fixed interest, property and shares). By adopting a long-term investment horizon, portfolio returns can be better optimized as mean reversion in the returns of the different asset classes is more in play (Brennan and Schwartz, 1997). In practice, financial planners recommend a strategic asset allocation for clients on the basis of their risk profiles and try to maintain their portfolios within this benchmark (Taylor et al., 2010). Financial planners provide support for this approach through academic literature as the following typical explanation shows:

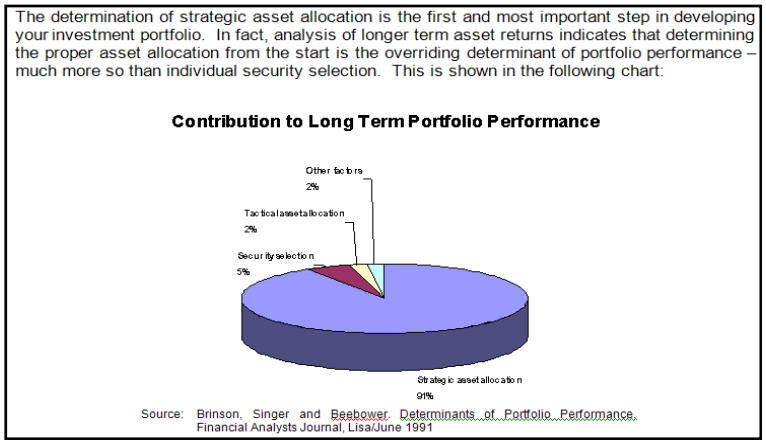

Figure 1 Sample Extract from A Financial Plan

Lujer Santacruz, Lecturer, University of Southern Queensland; research areas: investments, financial planning. E-mail: santacru@usq.edu.au.

The study cited above, Brinson 1991, was based on investment data in the United States. The present paper aims to confirm the importance of strategic asset allocation using Australian investment data.

2. Review of Literature

Early works provided the theoretical foundation for the concept of investment performance attribution, initially decomposing returns into those attributable to market timing and those attributable to security selection (Fama, 1972).

The current popular model incorporates the returns from both the passive and active aspects of investment portfolio management (Bacon, 2008):

$$r_{total} = r_{passive\ portfolio} + r_{timing} + r_{selection} + r_{interaction} \quad (1)$$

The passive portfolio return or the benchmark return is that of a portfolio that has a long term or benchmark asset allocation with each asset class yielding benchmark returns.

$$r_{passive\ portfolio} = \sum(w_{pi} \times r_{pi}) \quad (2)$$

Where: w_{pi} = passive or benchmark weight for asset class i; r_{pi} = passive or benchmark return for asset class i.

The benchmark weightings can be taken as the strategic asset allocation. Benchmark returns are typically calculated from industry accepted accumulation indeces for the different asset classes.

The last three terms in Equation (1), taken together, represent the incremental return resulting from active investment decisions. Timing is the under or overweighting of an asset class relative to the benchmark weightings for the purpose of achieving incremental returns above the passive or benchmark returns.

$$r_{timing} = \sum(w_{ai} \times r_{pi}) - \sum(w_{pi} \times r_{pi}) \quad (3)$$

Where: w_{ai} = actual weight for asset class i

Security selection is the active selection of investments within an asset class for the purpose of achieving incremental returns above the passive or benchmark returns. Selection return is the portfolio's actual asset class returns in excess of those classes' benchmark returns weighted according to the benchmark asset allocation.

$$r_{selection} = \sum(w_{pi} \times r_{ai}) - \sum(w_{pi} \times r_{pi}) \quad (4)$$

Where: r_{ai} = actual return for asset class i

The previous components may not completely account for the total return and therefore the last term, interaction return, is needed. However, studies of major equity markets US, UK and Japan show that its relative magnitude is not significant (Bacon, 2008). It was also found to be small in a study of US pension funds (Brinson et al., 1991). The present paper will therefore adopt the following simplified version of Equation (1):

$$r_{total} = r_{passive\ portfolio} + r_{timing} + r_{selection} \quad (5)$$

Literature suggests that among managed funds, active investment management in terms of market timing and security selection does not conclusively add returns to passive investment management. A study among Australian pension funds found that fund managers do not exhibit significantly positive market timing or security selection skill (Gallagher, 2001). Another study among Australian managed funds showed that active managers have been unable to deliver superior returns through tactical asset allocation, which is somewhat equivalent to market timing (Faff et al., 2005).

As mentioned earlier, Brinson 1991 is often cited to highlight the importance of strategic asset allocation. This study among 82 large pension funds in the US found that active investment decisions by fund managers did

little on average to improve portfolio performance over the 10-year study period. Strategic asset allocation was found to be the overwhelmingly dominant contributor to total return, accounting for 91.5% of its variability. The present paper aims to determine the impact of strategic asset allocation on total portfolio returns using data available on Australian managed funds.

3. Data and Method of Analysis

The present paper utilizes a similar methodology to Brinson 1991. Total returns and the magnitudes of each component were determined for the managed funds. The total returns were also regressed against the components to determine the relative amount of variability in total returns attributable to each component. This provides an indication of the relative importance of the investment decisions affecting total portfolio return.

The present paper utilized historical data for the various diversified funds managed by Vanguard Investments Australia. Managed funds across the range of investment options were included in the study.

Table 1 Managed Funds Utilized in the Study

Name of fund	Fund size as of 30 June 2012	Historical data studied
Conservative Fund	AUD 502.6 million	Jan 2003 to Jun 2012
Balanced Fund	AUD 985.1 million	Jan 2003 to Jun 2012
Growth Fund	AUD 929.8 million	Jan 2003 to Jun 2012
High Growth Fund	AUD 500.4 million	Jan 2003 to Jun 2012

For each managed fund, quarterly historical data were obtained for actual total return, benchmark asset allocation and actual asset allocation.

Table 2 Dataset for Each Managed Fund

Quarter:	Jan-Mar 2003	Apr-Jun 2012
Actual total return:	x	x
Strategic or benchmark asset allocation (%):		
Cash	x	x
Australian fixed interest	x	x
International fixed interest	x	x
Property	x	x
Australian shares	x	x
International shares	x	x
Actual asset allocation (%):		
Cash	x	x
Australian fixed interest	x	x
International fixed interest	x	x
Property	x	x
Australian shares	x	x
International shares	x	x

Over the same study period, quarterly returns were calculated using historical total return or accumulation index values for industry accepted benchmark indeces representing the different asset classes.

Table 3 Benchmark Indeces Utilized in the Study

Asset class	Benchmark index (all in AUD)
Cash	JP Morgan Australia Cash Total Returns Index
Australian fixed interest	JP Morgan Australia Govt Bond Total Returns Index
International fixed interest	JP Morgan Global (ex-Australia) Govt Bond Total Returns Index
Property	S&P ASX Property Trust Accumulation Index
Australian shares	S&P ASX All Ordinaries Accumulation Index
International shares	MSCI World (ex-Australia) Gross Total Return Index

For each managed fund, the passive portfolio return or benchmark return for each quarter was calculated using the previously defined equation.

$$r_{passive\ portfolio} = \sum(w_{pi} \times r_{pi}) \quad (6)$$

Where: w_{pi} = passive or benchmark weight for asset class i; r_{pi} = passive or benchmark return for asset class i.

For each managed fund, the timing return for each quarter was calculated using the previously defined equation.

$$r_{timing} = \sum(w_{ai} \times r_{pi}) - \sum(w_{pi} \times r_{pi}) \quad (7)$$

Where: w_{ai} = actual weight for asset class i

The present paper differed from Brinson 1991 in calculating the selection returns. Whilst in their case, all data to needed to calculate selection returns directly using Equation (4) were available, it was not in this case. Quarterly selection returns were therefore calculated from the other three terms using a transposed version of Equation (5).

$$r_{selection} = r_{total} - (r_{passive\ portfolio} + r_{timing}) \quad (8)$$

4. Results of Analysis

The results are consistent with literature, in that strategic asset allocation was shown to account for the bulk of total portfolio returns in terms of magnitude. However, for the dataset utilized in this study, it appears that market timing and security selection have more significant contributions than what literature has shown.

Table 4 Magnitude of Component Annualized Returns

Name of fund	Fund size	r_{total}	$r_{passive\ portfolio}$	r_{timing}	$r_{selection}$
Conservative Fund	AUD 502.6 million	6.18%	5.08%	0.08%	1.02%
Balanced Fund	AUD 985.1 million	6.33%	5.07%	0.18%	1.07%
Growth Fund	AUD 929.8 million	6.62%	5.15%	0.06%	1.41%
High Growth Fund	AUD 500.4 million	6.47%	5.54%	0.12%	0.81%
Weighted average:		6.42%	5.18%	0.11%	1.13%

Regressing the total returns against the various components to determine the relative amount of variability attributable to each one shows that strategic asset allocation dominates the other investment decisions. On a weighted average basis, it accounts for 88% of the variability in total returns. This is consistent with the results of Brinson 1991 which found that it accounts for 91.5% of the variability in total returns of US pension funds.

Table 5 Percentage of Total Return Variability Attributable to Each Investment Activity

Name of fund	Fund size	Strategic asset allocation	Market timing	Security selection
Conservative Fund	AUD 502.6 million	70.00%	0.50%	29.50%
Balanced Fund	AUD 985.1 million	87.30%	0.00%	12.70%
Growth Fund	AUD 929.8 million	92.70%	0.00%	7.30%
High Growth Fund	AUD 500.4 million	98.10%	0.00%	1.90%
Weighted average:		87.89%	0.09%	12.02%

It is interesting to note that strategic asset allocation plays a greater role as the proportion of risky assets in the portfolio increases. Perhaps this reinforces the findings of Brennan 1997, in that it is more important to adopt a strategic asset allocation with risky portfolios so that mean reversion in the returns of the risky asset classes is better realized in the long term.

5. Summary and Conclusion

The aim of the present paper is to confirm the importance of strategic asset allocation as far as the overall performance of an investment portfolio is concerned, using Australian investment data. This issue is important because of its implications on investment and personal financial planning advice given that financial planners usually advise clients to adopt a long term investment horizon through strategic asset allocation. The aim of this paper has been attained, with some limitations.

An obvious limitation of this study is that it only included four Australian managed funds. The total size of these funds, AUD 2.9 billion, although significant is still just a drop in the bucket. The size of the Australian managed fund industry is currently estimated at AUD 1.9 trillion (ABS, 2012). Although it has generated some useful general conclusions, this paper mainly serves as a starting point for conducting a more thorough study of managed investments in Australia as far as the importance of strategic asset allocation is concerned. Further research will be carried out using similar data that can be obtained from other fund managers.

Another area for further study is that of non-institutional investors. Self-managed superannuation (or pension) funds, for instance, would provide a picture of individual investors' investment decision making. It would be worth studying whether the same conclusions as above would be generated. However, self managed superannuation fund data might be more difficult to obtain than data from institutional investors such as fund managers.

Acknowledgements

The author would like to express sincere gratitude to Vanguard Investments Australia for providing historical data on their managed funds and allowing them to be used for this study. The author would also like to thank JP Morgan, Standard and Poors and MSCI for providing historical index values for the various asset classes that were included in this study.

References:

ABS (2012). "Managed funds Australia, March 2012", available online at: http://www.abs.gov.au/ausstats/abs@.nsf/mf/5655.0.

Bacon C. R. (2008). *Practical Portfolio Performance Measurement and Attribution*: *Wiley finance* (2nd ed.), Chichester, England; Hoboken, NJ: Wiley.

Brennan M. J. and Schwartz E. S. (1997). "Strategic asset allocation", *Journal of Economic Dynamics & Control*, Vol. 21, p. 1377.

Brinson G. P., Singer B. D. and Beebower G. L. (1991). "Determinants of portfolio performance", *Financial Analysts Journal*, Vol. 47, pp. 40-48.

Faff R., Gallagher D. R. and Wu E. (2005). "Tactical asset allocation: Australian evidence", *Australian Journal of Management*, *University of New South Wales,* Vol. 30, pp. 261-282.

Fama E. F. (1972). "Components of investment performance", *Journal of Finance*, Vol. 27, pp. 551-567.

Gallagher D. R. (2001). "Attribution of investment performance: An analysis of Australian pooled superannuation funds", *Accounting & Finance*, Vol. 41, pp. 41-62.

Taylor S., Juchau R. H. and Houterman B. (2010). *Financial Planning in Australia*, Chatswood, N.S.W., LexisNexis Butterworths.